

Li-ion Battery Motors



Li-ion Battery Motors - We often get questions about the longevity of our rechargeable lithium-ion battery motors. They are great questions - ones that we have explored in depth over the past few years as we evaluated the opportunity to embed li-ion batteries within our motors.

Fortunately, lithium-ion battery technology is mature. It is proven and found in many of the products we interact with every day: smartphones, laptops, cars. We have been able to successfully apply this well developed battery technology inside of our motors with the following findings from real world testing.

Q: How many cycles does each charge provide?

A: Our Li-ion batteries are estimated to power up to 500 cycles per charge. These numbers are impacted by treatment size and fabric weight, but on average, our motors in prevalent size are able to last about a year and a half under normal operation (one cycle per day).

Q: How many recharge cycles per motor?

A: The rechargeable Li-ion battery motors can successfully be recharged around 500 times. Lifecycle testing, which included radio sleep/wake cycling as well as load testing, identified that our motors can be successfully recharged 500 times.

Q: Can the batteries be overcharged?

A: No, the motors feature a charge management circuit that adjusts the amount of electrical current feeding the battery. As a battery reaches its maximum charge, the circuit will limit the current eventually shutting off power once the battery is fully charged.

Q: Do the batteries degrade over time?

A: Slowly. Lithium-ion batteries degrade over time, as does everything. The real question is how much and when. Our lifecycle testing suggests that our Li-ion batteries exhibit nominal annual degradation and that the degradation is consistent over time (i.e. there is no cliff where the batteries will unexpectedly stop holding a charge). The batteries will degrade slowly over time - the rate depends on load, environmental conditions, manufacturing and use. But they can hold a meaningful charge for the duration of their useful life (500 charges).

Q: What is the warranty on li-ion battery motors?

A: R-TEC Automation[®] Li-ion battery technology is proven and reliable. Occasionally, as with anything else, we will experience product failures with our lithium-ion battery motors. As such, we offer and stand behind a 5 year warranty on all li-ion battery motors. Should the motor fail to perform, we will warranty it.

Still have Questions?

Contact our R-TEC Automation[®] in-house experts at 866.985.3423. Email us at RTECAutomation@RowleyCompany.com.